

Fig 1

PRIOR ART

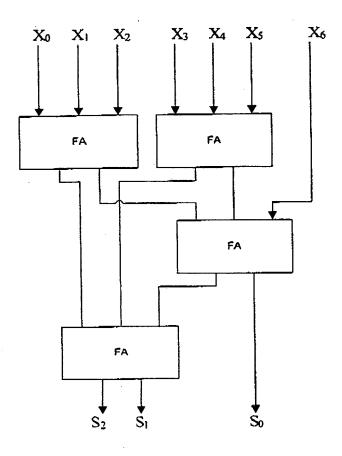


Fig 2

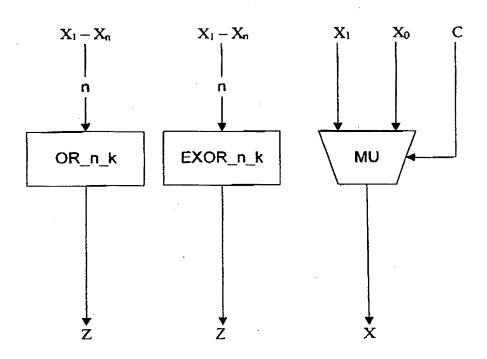


Fig 3

OR 3 1

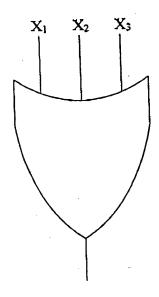


Fig 4

OR_4_1

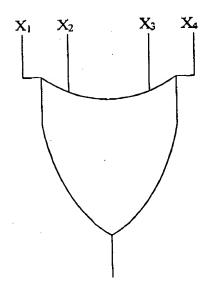


Fig 5



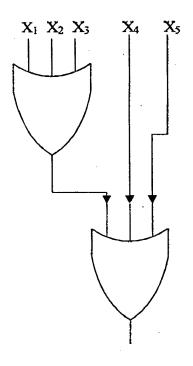


Fig 6

EXOR_7_1

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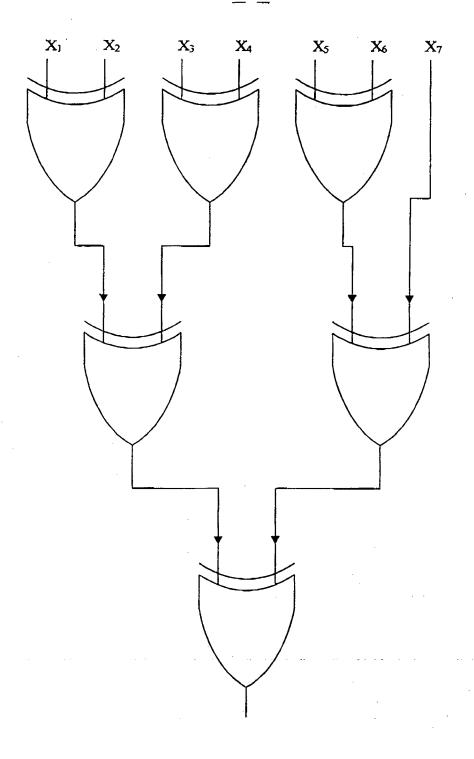


Fig 7

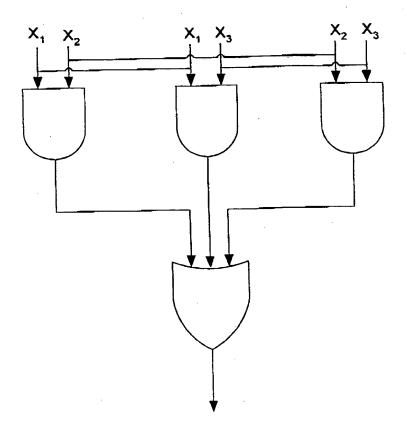


Fig 8

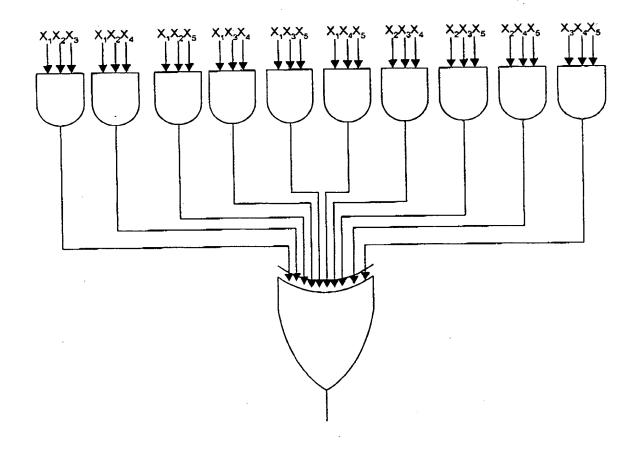


Fig 9

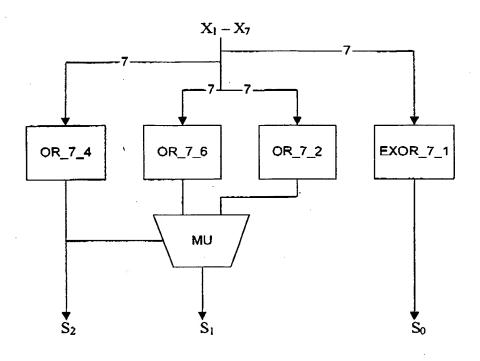


Fig 10

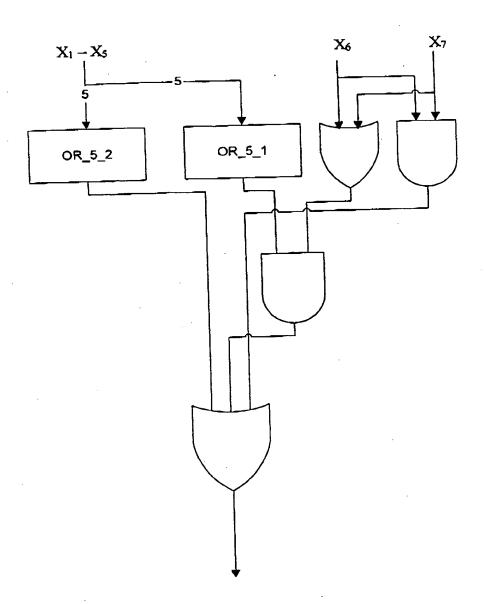


Fig 11

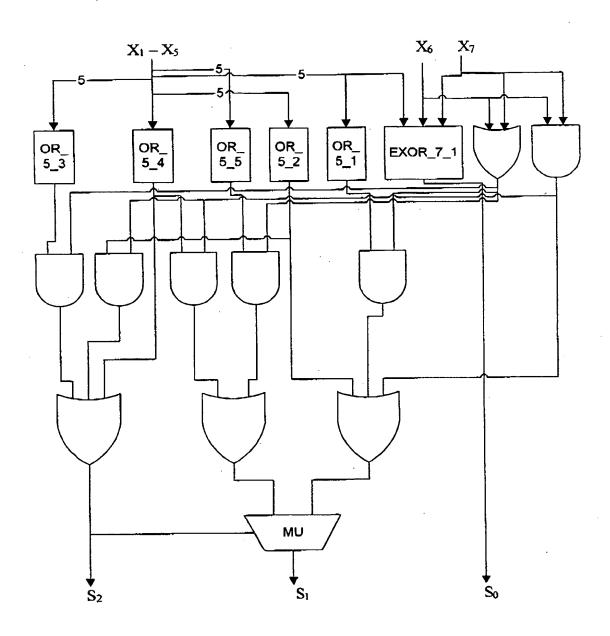


Fig 12

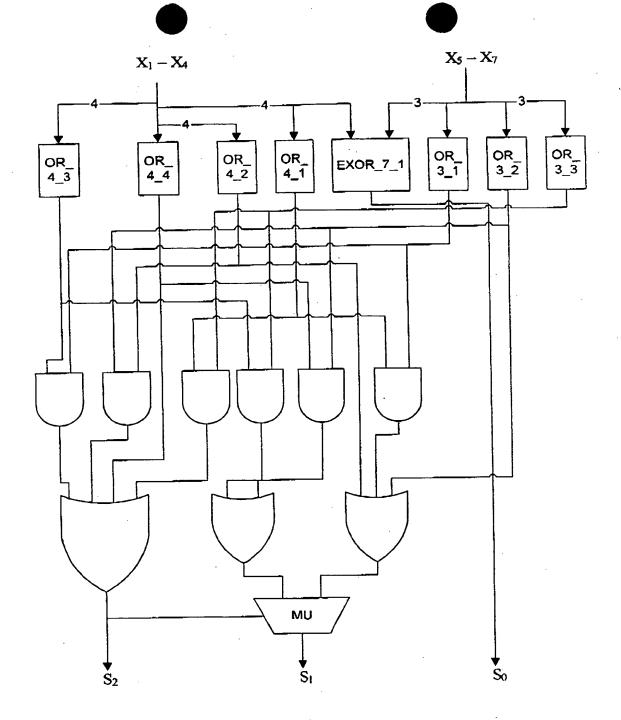


Fig 13

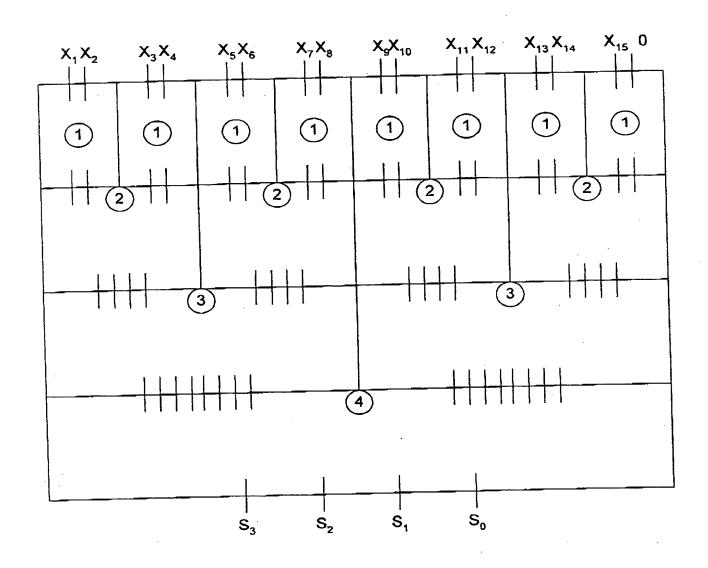


Fig 14.

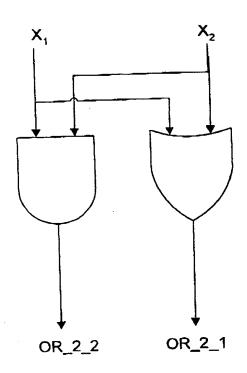


Fig 15

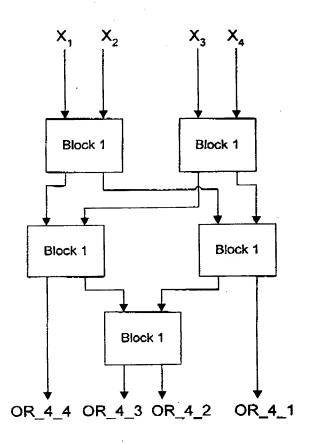


Fig 16

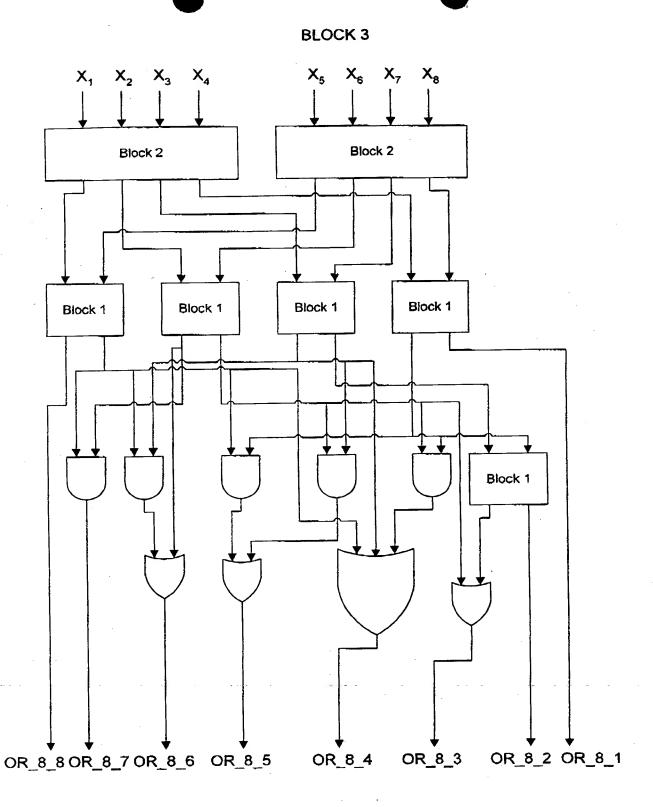


Fig 17

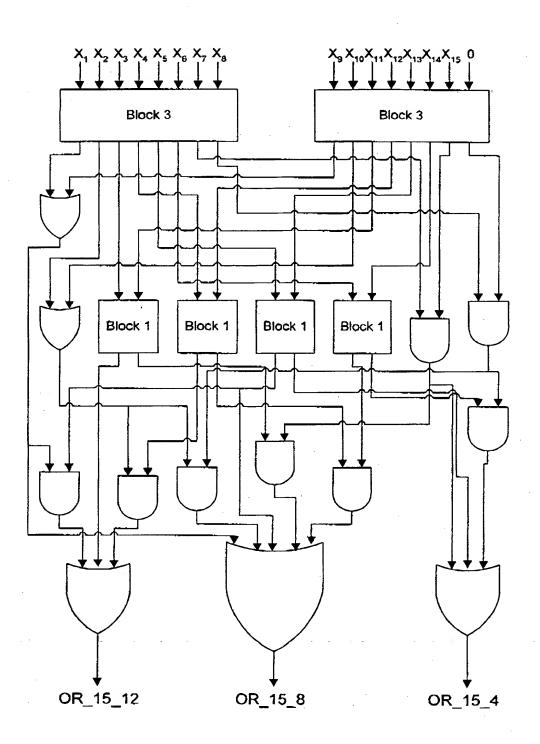


Fig 18

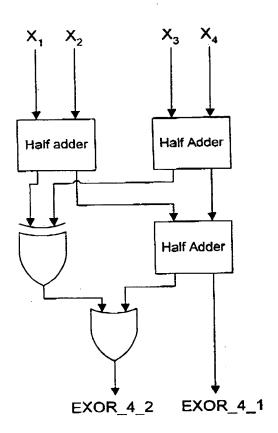


Fig 19

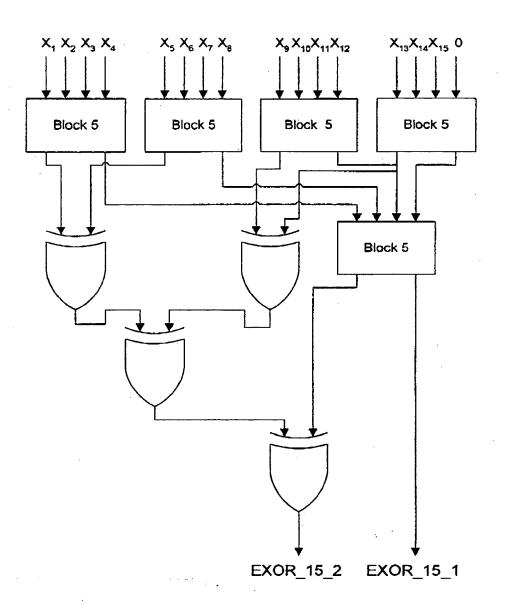


Fig 20

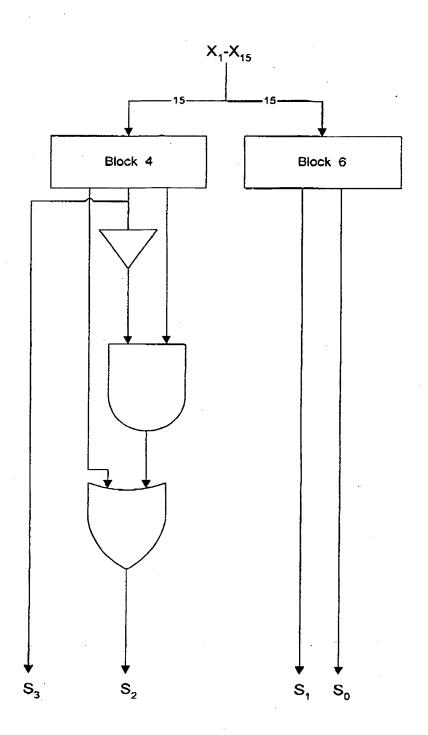


Fig 21

PRIOR ART

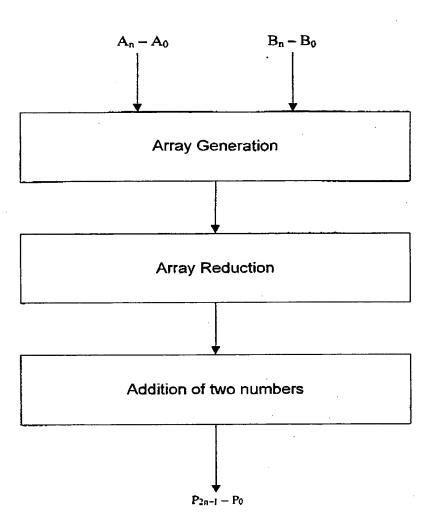


Fig 22

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PRIOR ART

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A_{7}B_{0}\ A_{6}B_{0}\ A_{5}B_{0}\ A_{4}B_{0}\ A_{3}B_{0}\ A_{2}B_{0}\ A_{1}B_{0}\ A_{0}B_{0}
                                                        A_7B_1\ A_6B_1\ A_5B_1\ A_4B_1\ A_3B_1\ A_2B_1\ A_1B_1\ A_0B_1
                                               A_{7}B_{2}\ A_{6}B_{2}\ A_{5}B_{2}\ A_{4}B_{2}\ A_{3}B_{2}\ A_{2}B_{2}\ A_{1}B_{2}\ A_{0}B_{2}
                                      A_{7}B_{3}\ A_{6}B_{3}\ A_{5}B_{3}\ A_{4}B_{3}\ A_{3}B_{3}\ A_{2}B_{3}\ A_{1}B_{3}\ A_{0}B_{3}
                            A_7B_4 \ A_6B_4 \ A_5B_4 \ A_4B_4 \ A_3B_4 \ A_2B_4 \ A_1B_4 \ A_0B_4
                   A_7B_5 \ A_6B_5 \ A_5B_5 \ A_4B_5 \ A_3B_5 \ A_2B_5 \ A_1B_5 \ A_0B_5
         A_{7}B_{6}\ A_{6}B_{6}\ A_{5}B_{6}\ A_{4}B_{6}\ A_{3}B_{6}\ A_{2}B_{6}\ A_{1}B_{6}\ A_{0}B_{6}
A_7B_7 \ A_6B_7 \ A_5B_7 \ A_4B_7 \ A_3B_7 \ A_2B_7 \ A_1B_7 \ A_0B_7
                                      using 16 FA blocks
                                         using 11 FA-s and 1 HA
                                        using 7 FA-s
                                       using 5 FA-s and 2 HA-s
```

Fig 23

 $\begin{array}{cccc} & A_1B_0 & A_0B_0 \\ A_2B_1 & A_1B_1 & A_0B_1 \end{array}$

 $A_{3}B_{2}\ A_{2}B_{2}\ A_{1}B_{2}$

 $A_4B_3 \ A_3B_3 \ A_2B_3$

A5B4 A4B4 A3B4

A6B5 A5B5 A4B5

A7B6 A6B6 A5B6

A₇B₇ A₆B₇

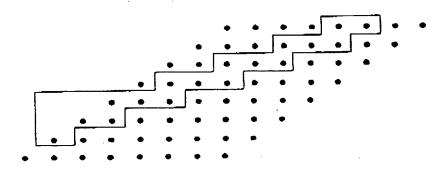


Fig 24

15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 - column numbers

using 1 HA, 3 FA-s, and 8 higher parallel counters

using 9 FA-s and 3 HA-s

Fig 25

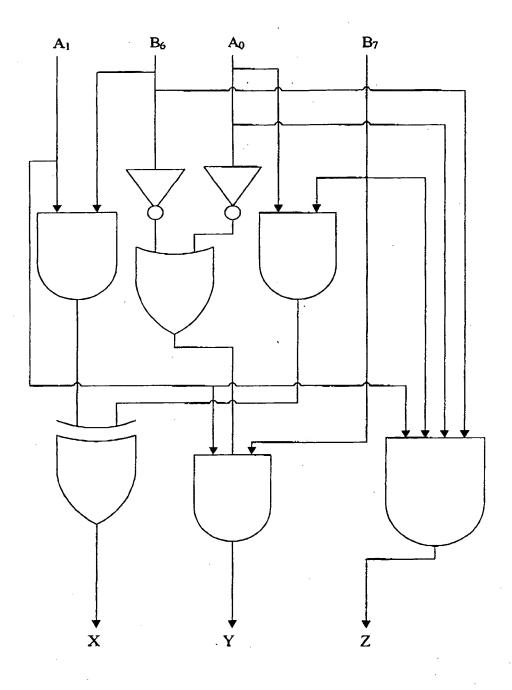


Fig 26